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Be0	M	4,086,074	04/78	Minot et al.						
1.1	AB	4,622,735	11/86	Shibata		,	<del></del>			
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	AE	4,766,090	08/88	Coquin et al.					-	
	AF	5,099,304	03/92	Takemura et al.		1				
	AG	5,236,865	08/93	Sandhu et al.	_					
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	AC	6,096,621	08/00	Jennings						
	AĐ	6,130,140	10/00	Gonzalez						
	AE	6,133,105	10/00	Chen et al.						• [
	AF	6,133,116	10/00	Kim et al.						
	AQ	6,177,235 B1	01/01	Francou et al.				7		
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260	*	6,440,793 B1	08/02	Divakaruni et al.						
7	AÐ	6,465,325 B2	10/02	Ridley et al.						
	AC	6,720,638 B2	04/04	Tran		_				
	40	6,780,728 B2	08/04	Tran						
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	AF	6,281,100 B1	08/01	Yin et al.	`					
	AG	6,291,363 B1	09/01	Yin_et_al						
(V)	AH	6,380,611 B1	04/02	Yin et al.						
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1	AB	5,904,517	05/1999	Gardner et al.		438	197				
	AC	5,998,264	12/1999	Wu		438	260				
	AĐ	6,180,465 B1	01/2001	Gardner et al.		438	291				
	AE	6,207,485 B1	03/2001	Gardner et al.		438	216				
160	AF	6,548,854 B1	04/2003	Kizilyalli et al.		257	310				
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160	AH	2003/0045060 A1	03/2003	Ahn et al.		438	287				
360	2	2003/0045078 A1	03/2003	Ahn et al.		438	585				
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